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Towards standardised evaluation tools

If you can not measure it, you can not improve it.

Sir William T. Kelvin

Increased ageing of society is common in many countries. Life expectancy includes all years of expected life, regardless of whether these years are enjoyed in good health or with significant disability. The primary public health goal is to increase the number of years of good health and, therefore, to maintain independence and quality of life as long as possible. Healthy ageing is characterised by the avoidance of disease and disability, the maintenance of high physical and cognitive function, and sustained engagement in social and productive activities [1].

The health status is an important indicator of the quality of life among older persons [2, 3]. It appears that especially various components of health-related fitness and functional performance, or serious, chronic conditions and diseases that directly influence the components of fitness and performance are related to perceived health among middle-aged and older adults [3–5]. Even in the absence of overt pathology, motor functioning [cf. International Classification of Functioning (ICF) by the World Health Organisation, Geneva (see <http://www.who.int/classification/icf>)] can deteriorate, as is illustrated by the incidence and impact of falls in ageing populations [6]. Because the functional status is by far the most important factor affecting the quality of life and healthcare utilisation in old age [7], valid, reliable and responsive outcome measures for the assessment of physical activity and/or physical functioning in aged individuals are of utmost importance.

For both researchers and clinicians addressing health issues in the ageing population, however, it still is a major challenge to effectively monitor physical functioning. Mobility disability or disability in activities of daily living (ADLs) is usually assessed with self-reports, where participants are asked to report whether they have difficulties or need help in performing basic ADLs or mobility-related tasks [8]. Objective, performance-based measures of physical function have the disadvantage, as Freiburger *et al.* [9] nicely summarise in their systematic review, that little information about their psychometric properties is available. A recent development is the use of body fixed sensor technology for studying human movement. Based on the use of miniaturised motion sensors, methods are available for long-term monitoring of daily physical activity and the assessment of motor functioning under real-life conditions. These methods are highly relevant for studying motor functioning in older people; however, currently available literature does not present a wealth of information about long-term monitoring of movements in older subjects [10, 11] and does not provide recommendations of a standardised set of outcomes which researchers and clinicians should use.

There are, thus, numerous tools that can be used to assess various conditions in the elderly. Agreement on which tools should be used consistently would help facilitate multicentre trials and the development of benchmarks in geriatric rehabilitation [12]. Consensus on assessment and outcome tools would, furthermore, facilitate multicentre comparative studies. One method of achieving these goals would be through a consensus conference, e.g. [13]. The paper of Freiburger *et al.* [9] could be a starting point

for coordinated collection and synthesis of outcomes from clinical practice, and for prospective outcomes studies in research centres that use similar methodology. It is up to the healthcare practitioners and researchers to take up this challenge.

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